

ANCIENT MAGIC IN MODERN MEDICINE*

"... our use
of holy numbers would shock you ..."

W.H. Auden, 1958

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"One, two, button my shoe,/Three, four, shut the door,/Five, six, pick up sticks ... " Mother Goose, singing spells in numbers. Mother Goose comes from ancient folklore, some time between the 8th and 18th centuries. Whenever the beginnings, these children's couplets exemplify one of humankind's oldest preoccupations: divination by numbers. Implicit in divination (from Latin *divinatio* the gift of prophecy) lies the notion that by predicting an event or by seeing beyond the boundaries of the sensible universe one can influence outcome or attain mastery over the Beyond. Divination may call upon spirits or apparitions to supply knowledge. The process was widely applied in early stages of religious and medical culture throughout the world and persists to the present day in crystal gazing, astrology, palmistry, fortune telling, in the use of the divining rod, and in other forms. One of those forms is number (1).

In our everyday lives all of us practice—covertly, openly, unconsciously or consciously, brazenly or guiltily—some leftover numerical superstitions. Barely aware of what we are doing we unwittingly cast some spells every day. As children we made choices by chanting "one potato, two potato, three potato, four; five potato, six potato, seven potato, more." As adults, when we say something of ill omen, we knock wood three times. We may take a risk once, maybe twice; not a third time. We are afraid to press our luck. Gamblers: dicers, cardsharps, horseplayers—all addicted to games of number—are notoriously superstitious. Numbers ward off danger. Don't make an angry response to a provocation; count to ten first or instead.

Medical scientists and practitioners do these things, too, and not only in their ordinary lives—in their scientific activities, as well.

I shall here try to convey some idea of the power of numbers as "influential principles" in pre-scientific, extrascientific and scientific thought, particularly in ancient Hebrew religious and political life as recorded in the Bible, and how that numerology influences modern

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medical practice. We will examine just a few numbers: one, two, three, four—with brief glances at seven and nine—and forty. And the greatest of these, as will be seen, is forty. The number ten is omitted deliberately, for “ten” smacks too much of the metric system, of logarithms, of science, although even “ten” has a primitive taint: the ten fingers of the human hand. The chief aim is to show that visceral, non-scientific numerology still governs some patches of medical practice. The goal is not to humiliate modern science but to suggest that humility should still be an essential corrective in the practice of science. Humility should be the principal attribute of a scientist or a practitioner. Humility, in short supply among ecclesiastics, scientists and doctors, should at least make us recognize the irrational when we are practicing it.

Now, numerology, the occult study of the meaning of numbers, is an ancient form of magic. The mystical theory of numbers in the West dates from Pythagoras (6th century BC) who held that all things are numbers and that number influences the essence of things. Thus number is the mediator between the divine and the earthly. Operations with numbers affect the things related to those numbers. Taboos, good and bad, arise from number. Twelve is a good number, identified with the Zodiac. Thirteen is bad, unlucky (except in Belgium): Friday the 13th, the 13th floor (often omitted), Judas, the 13th person at the Last Supper. In the Pythagorean system, all the numbers from 1 to 10 had specific symbolic meanings and carried significance in mathematics, astronomy and music, hence the “music of the spheres”. One was the first principle: God, male, immortality, the East, unity, the right side, the day, the sun, the equality. Two signified divisibility, female, the mortal, the left side, the night, the moon, and inequality. The odd numbers above one were male, the even female, like the Chinese opposition of Yang and Yin. The magic number 3, $1 + 2$, represented perfection and stood for all reality, both unity and diversity. There are sacred trinities in many religions, including the Christian (see the symbolism of the magic of 3 in the structure of Dante’s *Divine Comedy*), Hindu and Egyptian. Three is not universally sacred; among American Indians the holy number is 4 (2, 3).

Divination by number was a commonplace in ancient, medieval, Renaissance, and fairly recent medicine. It is still a commonplace of folk medicine everywhere. The number nine has always been used as a prophylactic and a cure for every disease and mishap, perhaps related to the 9 months of human gestation. Nine (3×3) was and is the most popular medical number in Britain. A child was passed over and under an ass 3 times for 9 successive mornings to cure whooping cough. Scottish lasses removed freckles by washing their faces in buttermilk in which for 9 days silver weed had been steeped. Saxon leeches treated blains with 9 hard boiled eggs. In Lancashire, nine pieces of elder wood controlled

epilepsy. In Ancient Assyria, the god had to root out seven evil spirits and expel them from the patient's body. In Devonshire, the 8th Psalm repeated 7 times cured a sore mouth (4). The potency of 7 and 9 remain unexplained.

The religious, mythic and medical power of "forty" also remains mysterious. But forty still exerts powerful influence. Several sources hold that forty has been treated through history "as, in a manner, sacrosanct" (5). At times, the uses of "forty" appear to take origin from approximations based on fact. Solomon's forty year reign actually lasted 37 years (BC 965-928). In the era of the Old Testament, one human generation or life span probably averaged *about* 40 years. Moses (*ca.* BC 1300) sojourned forty days and nights on Mt. Sinai, presumably *about* forty days and nights. The same may be said for other historical events: the tribes of Israel wandering forty years in the desert, the rain of the Flood falling for forty days (6) with another forty days elapsing before Noah opened the window of the ark, Elijah being fed by ravens for the same period. From such examples, "forty" passed unaccountably into religion, mythology and medicine: Nineveh was granted 40 days to repent, 40 days was the period for embalming among the Hebrews, Jesus fasted 40 days in the wilderness (hence the 40 days of Lent), Christ was seen by human beings 40 days after his resurrection. In the early history of the Catholic Church, abortion was punished as murder only if it was performed after the soul became "animated," a time determined to be at 40 days after conception for males and 80 days for females. In cultures other than Hebrew, "forty" also assumed great importance. In classical Greek medicine, Hippocrates (4th century BC) taught that the 40th day of a disease was one of the critical days. The Eastern Orthodox Church prescribes a Mass on the 40th day after Easter; sexual intercourse is prohibited during the 40 days and nights of Lent; after any death a special service is mandated for the 40th day *post mortem*. In the Anglo-Saxon world, a stranger had to enroll in parochial tithing after 40 days in residence; the ecclesiastical privilege of sanctuary was tendered for 40 days only (5); a widow was allowed to stay in her husband's house for 40 days after his death. In Afghanistan, a baby may not be bathed until it is 40 days old. The Sikhs hold that the soul of a human enters the body on the 120th day (3×40) after the fetus has been conceived.

"Forty" has penetrated further into our lives in law, myths and popular usages; 40 lashes, Ali Baba and the 40 thieves, life begins at 40, "a fool at 40 is a fool indeed", forty winks, a gypsy spell forbidding the driving of an automobile for 40 days after experiencing a piece of bad luck (7). And in medicine, there was the quarantine, dating from 1374, wherein travelers suspected of being carriers of bubonic plague were isolated, arbitrarily, for 40 days (*quaranta giorni*—compare the American medical

custom of a 14–40 day period of isolation against the childhood exanthemata, a practice persisting into the 1930s).

Plainly, there's something odd about the even number, "forty"; it seems to hold magical powers that go beyond one of the *Oxford English Dictionary's* definitions of forty: "any large number". The most blatant anachronistic use of "forty" I know of in medicine is the prohibition laid upon *post partum* women, lasting for 6 weeks. The source is *Leviticus xii*: "If a woman have born a male child: then she shall be unclean seven days . . . And she shall then continue in the blood of her purifying for three and thirty days." $7 + 33 = 40$. (I am assuming that $40 = 42$, 6 weeks; in this context there is no statistical difference). During those 40 days, the woman was forbidden to touch "any hallowed thing" or to "come into the sanctuary, until the days of her purifying were fulfilled" through one or more sacrifices offered. This ritual persists in modern Judaism, although deemed heretical by Maimonides (1135–1204) who believed the "unclean" period to be in fact 21 days only. It also survives in the Eastern Church: a woman may not enter the church or engage in social activities until after the 40th *post partum* day. And in the Roman Catholic rite, the Feb. 2 service wherein the presentation of the infant Christ in the Temple is commemorated, the practice was formerly known (up to the Missal of 1957) as The Purification of the Blessed Virgin Mary, occurring 40 days after the birth of Jesus "When the days of Mary's purification were fulfilled according to the Law of Moses" (*Luke ii:22*). The Psalm appointed for this service contains these prayers: "Wash me thoroughly from mine iniquity, and cleanse me from my sin"; "... wash me, and I shall be whiter than snow" (*Ps. 51:2,5*). This usage was translated to the Anglican rite in the service for the Churching of Women, the Purification of Women after Childbirth; in 16th and 17th century England women in the puerperium were enjoined from approaching the altar until after that service had been performed (8). Among the Hindus, a woman was, well into modern times (1930s–50s), kept in seclusion (*purdah*) for 40 days *post partum* (9). The same 40-day period is still observed in Central Africa.

In our late 20th century obstetrical practice, the 40 day rule is still being inculcated into medical students and applied in after-care. *Post partum* utero-vaginal discharge, the lochia, normally lasts two weeks or less. That has been known for a long time (10). Yet, up to now, the teaching has held that some abnormality or impurity, not specified, persists for six weeks, 42 days (tantamount to the Biblical 40 days), during which the patient must abstain from douching or sexual intercourse, and must not be examined, for fear of infection. As recently as 1977 the standard *post partum* examination was by custom deferred for six weeks after delivery "when most of the systemic changes of pregnancy

have receded" (11). Yet it has long been known that the entire endometrium, except for the placental site, is completely regenerated by the 21st day and by then the vagina has regained its rugae. Modern obstetrical thought is at last beginning to modify the forty day rule. "Delay of examination of the mother until six weeks *post partum* became routine practice in obstetrics, but from the point of view of optimal clinical care, the reasons for selecting that time are not particularly clear . . ." (12). Those reasons are quite clear if you take into account the tradition of *Leviticus*. Up to date obstetricians now examine mothers three weeks *post partum*; intercourse is then perfectly permissible, contraceptive measures can be safely instituted or reinstated if desired, and it is even possible to insert intrauterine devices with safety (12). The inference seems clear that the traditional six week period of prohibition derives more from the forty day interdiction of *Leviticus* than from obstetrical or gynecological necessity. The female sexual apparatus has mostly involuted within three weeks (21 days) after parturition, half of forty days, (as set down by Maimonides 700 years ago), with variations depending upon the presence or absence of nursing, *i.e.*, of persistent lactation; but old traditions and fixed habits die hard. A residual consolation is at least this: we may be grateful that our medical forefathers refrained from placing a still more literal interpretation upon the rules and regulations of *Leviticus xii*, wherein forty days of purdah applied to mothers of male infants, eighty (40×2) if the baby is a girl.

The foregoing analysis fails to explain the intrinsic magical power of 40 in diverse cultures all over the world, but it may give some sense of the ancient, deep rooted and unperceived elements that govern our day to day feeling and conduct; not only in ordinary life but also in the workings of rationalistic medical science, where ingrained practice has been dictated by outworn numerical taboos now known to be scientifically unsound and even theologically heretical; nevertheless lodged in us by habit, ritual, tradition, millennial repetition; in fact, by magic. Sequestration of women for forty days after childbirth somehow purifies them from a condition or process not physiologically, pathologically, psychologically, or morally impure. The supine 2500-years' adherence of the medical profession to the number forty in this instance has made primitive, credulous children, of us all—mothers, physicians, and scientists.

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DISCUSSION

Prout (Boston): Some of you may remember that about 1937–38, Weiss & Parker described the pathological changes occurring each day after myocardial infarction showing that the healing was complete in forty days. And as a result, in the early 1940's, it was standard practice in many hospitals to tell people following myocardial infarction that six weeks of absolute rest was required.

Christy: Thank you Curtis. And before I forget, I'd better add one more scientific example to those two, if I may. The magic of 40 may persist even to this moment in cosmologic physics. In John Updike's novel, *Roger's Version* (New York, A. A. Knopf, 1986 p. 24) there's this passage: "About fifty years ago a physicist called Paul Dirac asked himself why the number 10 to the 40th power keeps occurring. The square of the number, ten to the eightieth, is the mass of the visible universe, measured in terms of the mass of a proton. The number itself, ten to the fortieth, is the present age of the universe expressed in the units of time it takes light to travel across a proton. And . . . the constant that measures the strength of gravity in terms of the electrical force between two protons shows that gravity is ten to the fortieth times weaker—and so on and so on." Is it possible that the significance of forty has a physical basis?

Smythe (Houston): In Islam there is another fortieth day, and that is the last service for someone who has died is on the fortieth day subsequent to his or her burial. No mourning is permitted after that. If one asks why, this is the highly rational answer. If the person is in heaven, one should be rejoicing; if in hell, one has no business mourning him.

Christy: This is a little tangential to what you've just said, and I thank you. But, I do have a theological interpretation (speculative) of the difference between the impurity

periods as between male and female infants (forty days for boys, eighty for girls). This is to be found in one of the many theological volumes that I plowed through in preparation for this talk. That period has nothing to do with impurity, as we think of it in the moral sense nor with uncleanness. Rather, in Hebrew thought, it relates to the showing of blood—that was the bad part. Bleeding signified weakness, and weakness signified apartness from God. Since female infants were of course assumed to be feebler than male ones, femaleness was a condition of greater enfeeblement, greater weakness, therefore a greater distance from Deity (*Leviticus xii*). Hence a longer time was required to recover from that weakness and that greater separateness from Jehovah. You're on your own in the interpretation of that.